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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,587	05/08/2001	Murali Chaparala	ONX-117A	2627
27652	7590	12/04/2003	EXAMINER	
JOSHUA D. ISENBERG 204 CASTRO LANE FREMONT, CA 94539			ZAVERI, SUBHASH	
			ART UNIT	PAPER NUMBER
			2862	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,587

Applicant(s)

CHAPARALA, MURALI

Examiner

Subhash A Zaveri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-19, 21 and 23-29 is/are rejected.
- 7) ☒ Claim(s) 14, 20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAIL ACTION

1. This communication in response to applicant's amendment received on 07/23/03.
2. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view ground(s) of rejection.

Claim Rejections - 35 USC § 102(e)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 (e) that form the basis for the rejections under this section made in this Office action.

A person shall be entitled to a patent unless:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. **Claims 1-13,15-19, 21 and 23-29** are rejected under 35 U.S.C. 102(e) as anticipated by Bernstein (US 6,388,789). The claimed invention read on Bernstein as follows:

As to claim 1, Bernstein discloses a method for measuring a position of a micro machined optical element 200 of Figs.7A-7B, comprising:

disposing one magnetic sensor 720a of Fig.7B on the micro machined optical element (column 15, line 5-10);

exposing the magnetic sensor to a magnetic field 79A of Fig.5;

measuring a change in a property of the magnetic sensor element 720a of Fig.7B as the position of the micro machined optical element changes (column 15, line 5-20);

As to claim 2-8, Bernstein discloses a method for measuring a position of a micro machined optical element 200 of Figs.7A-7B, comprising:

the magnetic sensor senses a magnetic field 79a of Fig.5 that is used to actuate the micro machined optical element;

the micro machined optical element includes a moveable portion 3 of Fig.7B and the magnetic sensor is disposed on the moveable portion as shown in Figs.7A-7B;

the magnetic sensor is selected from the group consisting of flux sensing coils 7 of Figs.5-7 and magneto optic sensor as shown in Figs.7A-7B;

the micro machined optical element includes a fixed portion 202 of Fig.7A-7B and the sensor includes the magnetic sensor located on the fixed portion as shown in Fig.7A-7B;

the magnetic sensor located on the fixed portion is disposed on a sidewall 3A of Fig.7A of the fixed portion;

the fixed portion includes a base 3 of Fig.7A and the magnetic sensor that is located on the fixed portion;

the fixed portion includes a top chip element 3 of Figs.5-7A and the sensor is located on the top chip as shown in Figs.5-7.

As to claim 9-13 and 15 -19, Bernstein discloses a method for measuring a position of a micro machined optical element 200 of Figs.7A-7B, comprising:

the sensor that is located on the movable portion and the sensor that is located on the fixed portion are electrically coupled in a bridge circuit layer as shown in Fig. 3B

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(column 8, line 47-63);

the bridge circuit is a Whetstone bridge circuit as shown in Fig.3B;

the magnetic sensor senses a sense magnetic field 89 of Fig. 4C that is separate from a magnetic field as shown in Fig. 7A (column 14, line 13-20) that actuates the micro machined optical element 200 of Fig.7A (column 13, line 50-55);

a magnetic structure 100 of Fig. 4C disposed on the micro machined optical element creates or changes the magnitude or direction of the sense magnetic field;

the magnetic sensor is selected from the group consisting of flux sensing coils 6,7 of Fig.4C, and magneto optic sensor 200 of Fig.7A;

the magnetic sensor includes two or more magnetic sensors 6, 7 of Fig. 4C;

the two or more sensors are coupled together in a bridge circuit as shown in Fig. 3B (column 8, line 47-63);

the bridge circuit is a Whetstone bridge circuit as shown in Fig.3B;

the micro machined optical element includes a moveable portion 3 of Fig. 5 wherein the moveable portion is moveable with respect to an axis 40;

the magnetic material is disposed parallel to the axis as shown in Fig.4C.

As to claim 21 and 23-25, Bernstein discloses a method for measuring a position of a micro machined optical element 200 of Figs.7A-7B, comprising:

the magnetic material is located perpendicular to the axis as shown in Fig. 5;

measuring a temperature and compensating with a thermal compensation layer 3A of Fig.9I for a change in the property of the magnetic sensor as shown in Fig.9I

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(column 17, line 39);

the compensating step includes determining a relationship between the property of the magnetic sensor and the measured temperature as shown in Fig.9I (column 17, line 39- 43);

the compensating step includes regulating the temperature to maintain the temperature within a desired range as shown in Fig.9I (column 17, line 15-24).

As to claim 26-29, Bernstein discloses a method for measuring the position of a micro machined optical element 200 of Fig. 7A, the micro machined optical element having the magnetic sensor, the method comprising:

As to claim 26, Bernstein discloses a method for measuring the position of a micro machined optical element 200 of Fig. 7A, the micro machined optical element having the magnetic sensor, the method comprising:

exposing the magnetic sensor to a magnetic field as shown in Fig.7B (column 15, line 7);

measuring a change in a property of the magnetic sensor as a position element 3 of Fig.7A of the micro machined optical element changes.

As to claim 27-29, Bernstein discloses a method for measuring the position of a micro machined optical element 200 of Fig. 7A, the micro machined optical element having the magnetic sensor, the method comprising:

measuring a temperature and compensating with a thermal compensation

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layer 3A of Fig.9I for a change in the property of the magnetic sensor;

the compensating step includes determining a relationship between the property of the magnetic sensor and the measured temperature as shown in Fig.9I (column 17, line 39- 43);

the compensating step includes regulating the temperature to maintain the temperature within a desired range as shown in Fig.9I (column 17, line 15-24).

Allowable Subject Matter

7. **Claims 14,20 and 22** are objected as being dependent upon a rejected independent claim, but it would be allowable if rewritten in independent form.

Prior Art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jing. (US 6259835) is cited to show a device for actuated optical switch.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Subhash Zaveri whose telephone number is (703) 305 1972. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, N. Le can be reached on (703) 308-0750. The faxes phone number for this group is (703) 872-9306.

Any inquiry of general nature or relating to the status of this application should be directed to the Customer Service at (703) 308-0596.



Subhash Zaveri
Patent Examiner
Tech Center 2862
November 28, 2003



N. Le
Supervisory Patent Examiner
Technology Center 2800